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Claim 76 (amended) An isolated antigen comprising a molecular structure that is identifiable with an antibody probe produced by harvesting an antibody from antibody producing cells of a mammal that are at or close to an infection or lesion site within a short time after said mammal is challenged by infection with *Mycoplasma hyopneumoniae* at said infection or lesion site, said molecular structure being a native *Mycoplasma hyopneumoniae* antigen having an approximate molecular weight in kilodaltons (kD) of between 110 - 114, 90 - 94, 72 - 75, 60 - 64, 52 - 54 or 46 - 48, or being a mutant, derivative or fragment of the native antigen that stimulates production of the antibody in the antibody producing cells, wherein if the molecular structure is the native antigen having the molecular weight between 72 - 75 kD, the molecular structure contains an N-terminal amino acid sequence comprising SEQ ID NO:12, and wherein if the molecular structure has a molecular weight between 46 - 48 kD, the molecular structure has an N-terminal amino acid sequence comprising SEQ ID NO:3.

REMARKS

The Official Action of August 30, 2000 has been carefully considered and reconsideration of the application as amended is respectfully requested.

Claim 76 has been amended further to distinguish over the cited art. Support for the recitations added to claim 76 appears in the specification as filed at page 18, line 21.

Claims 75, 76, 84, 85 and 89-92 have been rejected under 35 USC 102(b) as allegedly being anticipated by Faulds et al. Applicants respectfully traverse this rejection.